

Date: Tuesday, 7/24/2007 12:40:00 PM
 User: Kim Johnston

Process Sheet

31

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : A119 BUBBLE WINDOW ASSY
 Job Number : 33725
 Estimate Number : 12914
 P.O. Number : N/A Part Number : D119755014
 This Issue : 7/24/2007 S.O. No. : N/A Drawing Number : D3624 UNDER REVIEW OK 6/27/24
 Prsht Rev. : NC Project Number : N/A
 First Issue : N/A Type : THERMOFORMING Drawing Revision : C
 Previous Run : 33247 Material : N/A
 Due Date : 7/31/2007 Qty: 1 Um: Each
 Written By :
 Checked & Approved By : 07.07.24
 Comment : Est A New Issue 6/28/2007 DL

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy bluefile & type labels per PPP 119-755-014 CHG 001

KS 07.07.24 (1)

2.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

3.0 33725A A119 BUBBLE WINDOW



Comment: Sub-Component A119 BUBBLE WINDOW

B 33725A

4.0 D2126 Seal



Comment: Qty.: 7.4372 f(s)/Unit Total : 7.4372 f(s)

Seal

Batch# B32619

5.0 QC4 INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

6.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D119-755-014

Location:

PPP Rev:

DART

07/27/24

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: RD Date: 01/10/04
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 7/24/2007 12:40:01 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: A119 BUBBLE WINDOW ASSY

Job Number: 33725

Part Number: D119755014

Job Number:



Seq. #:

Machine Or Operation:

Description :

7.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

①
R 07/24/24

Job Completion



6 07.57.21

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

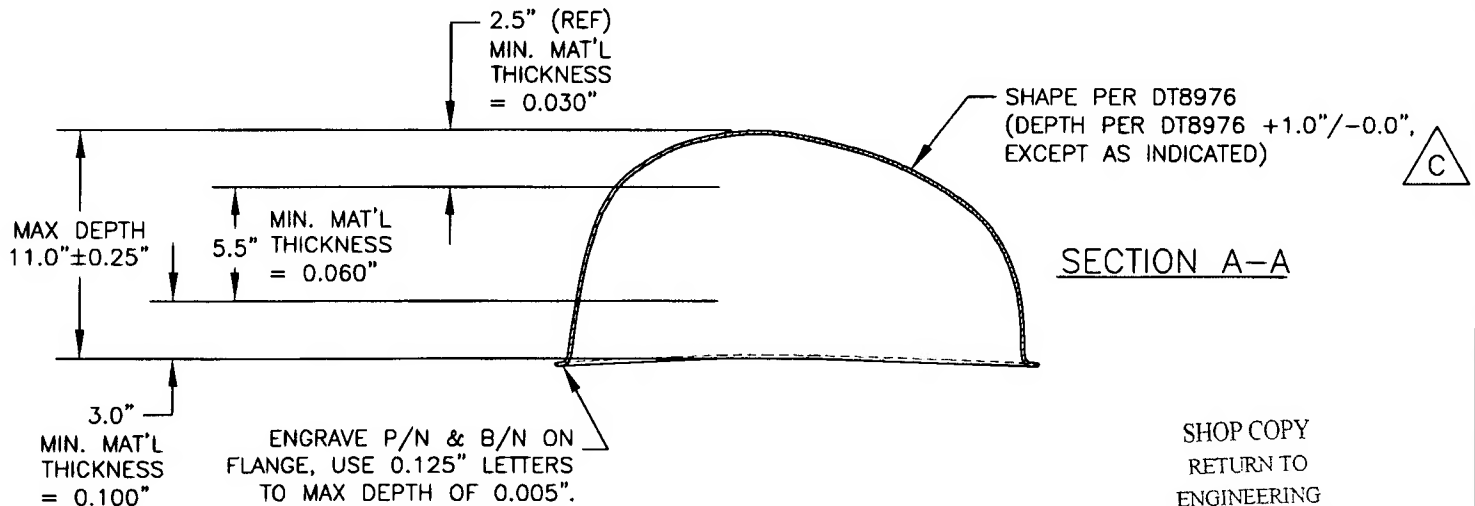
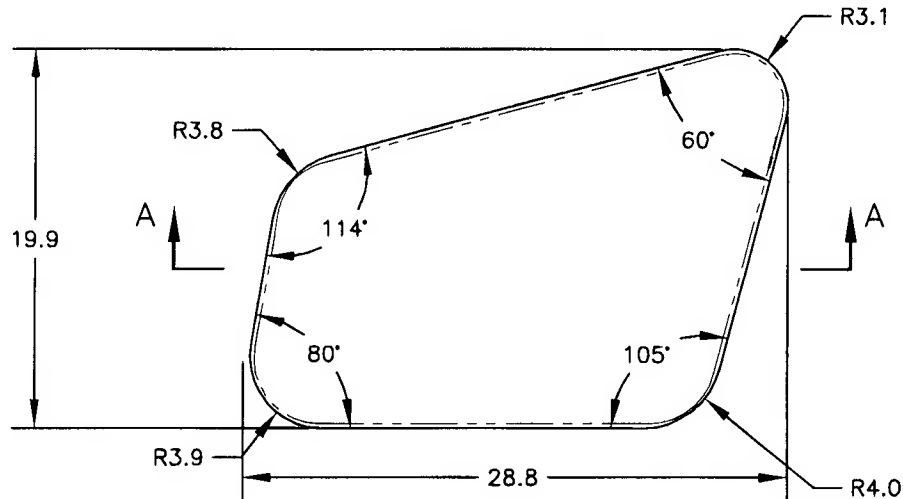
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN qp	DRAWN BY qp	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED H	APPROVED H	DRAWING NO. D3624	REV. C SHEET 1 OF 1
DATE 07.06.27		TITLE BUBBLE WINDOW (A119)	SCALE 1:10
A	07.05.14	NEW ISSUE	
B	07.05.24	11.0" DEPTH WAS 12.0"	
C	07.06.27	ADD TOOL TO CONTROL BUBBLE SHAPE	

RELEASED
07.06.28 H



D3624-2 BUBBLE WINDOW

1) MATERIAL: POLYCAST II CLEAR ACRYLIC OR PLEXIGLAS "G" CAST ACRYLIC, 0.177" THICK (REF DART SPEC. M-ACRYLIC-S.177)

2) FORM PER DT8953

- FORMING PROCESS:
- (a) DRAPE MAT'L OVER DT8953 MOLD
 - (b) HEAT TO 286°F
 - (c) VACUUM TO SPECIFIED HEIGHT
 - (d) LEAVE FOR AT 2 MINUTES TO COOL
 - (e) TRIM WINDOW PER DT8954

3) ALL DIMENSIONS ARE IN INCHES

4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

SHOP COPY
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WITHOUT NOTICE

WORK ORDER
NO. 33725

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Date: Tuesday, 7/24/2007 12:40:02 PM
 User: Kim Johnston

Process Sheet

31

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: A119 BUBBLE WINDOW	
Job Number	: 33725A			
Estimate Number	: 12911			
P.O. Number	: <i>N/A</i>	Part Number	: D36242	
This Issue	: 7/24/2007	S.O. No.	: <i>N/A</i>	
Prsht Rev.	: NC	Drawing Number	: D3624 UNDER REVIEW	OK 07.07.24 ENG Approval Res'd.
First Issue	: <i>N/A</i>	Project Number	: N/A	
Previous Run	: 33247A	Drawing Revision	: REV. C	
Written By	: <i>[Signature]</i>	Material	: <i>N/A</i>	
Checked & Approved By	: <i>[Signature]</i>	Due Date	: 7/31/2007	Qty: 1 Um: Each
Comment	: Est. A Thermoform in house 6/27/2007 DL Est B. Revised due to corrupt operating Program. 7/23/2007 DL			

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	MACRYLIC177	0.177" PLEXIGLAS G CLEAR CAST ACRYLIC SH
-----	-------------	--



Comment: Qty.: 10.0000 sf(s)/Unit Total : 10.0000 sf(s)
 0.177" PLEXIGLAS G CLEAR CAST ACRYLIC SH

1) Batch # *M105075*

2.0	HAND FINISH TH	HAND FINISHING THERMOFORMING
-----	----------------	------------------------------



Comment: HAND FINISHING THERMOFORMING

1) Cut Blanks to 30" by 48"

3.0	THERMOFORMING	THERMOFORMING MACHINE
-----	---------------	-----------------------



Comment: THERMOFORMING MACHINE

Thermoform as per Dwg. D3624 and Folio FTA 004

Dwg. Rev. *C*Folio Rev. *B*

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

1) Check Surface finish for undesired marks, voids, dimples etc. ✓

2) Check depth of bubble to ensure conformity to drawing tolerances. ✓

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 7/24/2007 12:40:02 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: A119 BUBBLE WINDOW

Job Number: 33725A

Part Number: D36242

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

HAND FINISH TH

HAND FINISHING THERMOFORMING



Comment: HAND FINISHING THERMOFORMING

1) Trim to Finished Dimensions ✓

07.07.24 Gk.

6.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET ✓

07.07.24 Gk.

7.0

HAND FINISH TH

HAND FINISHING THERMOFORMING



Comment: HAND FINISHING THERMOFORMING

1) Sand and Polish out any mould marks and/or blemishes ✓

07.07.24 Gk.

8.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

1) Visually inspect for clarity, and proper formation.

**ENGINEERING
APPROVAL**

BASED ON DS approval
OK of M105075/33247A
07.07.24

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

W 33725

10.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

①
07.07.24

Job Completion



W 07.07.24

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

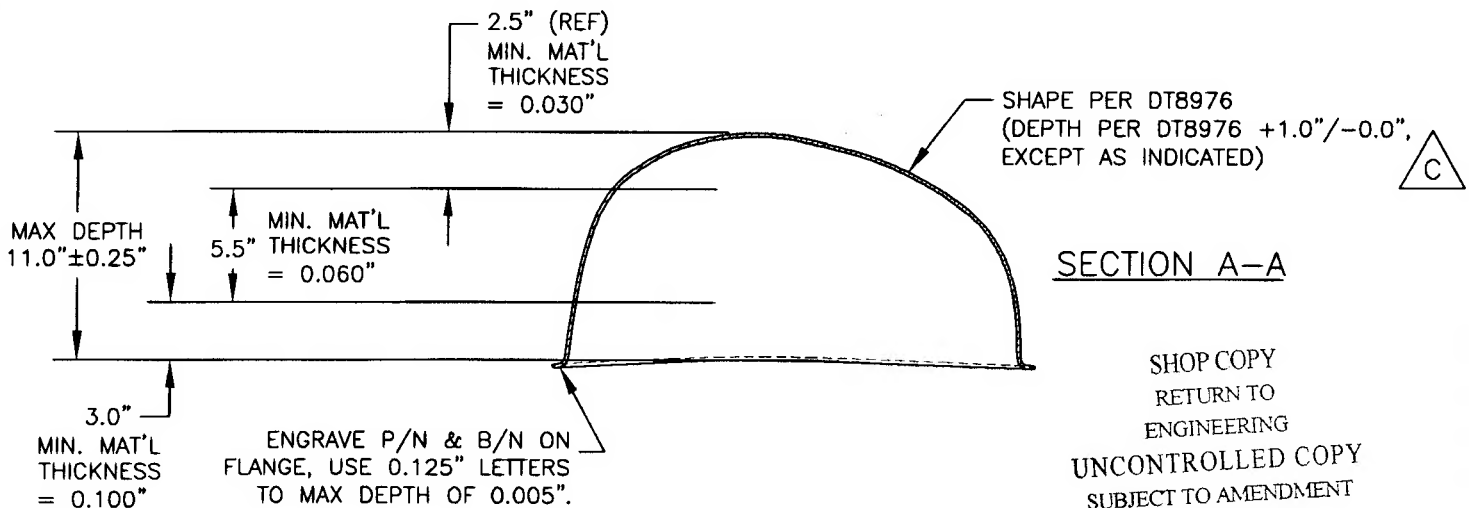
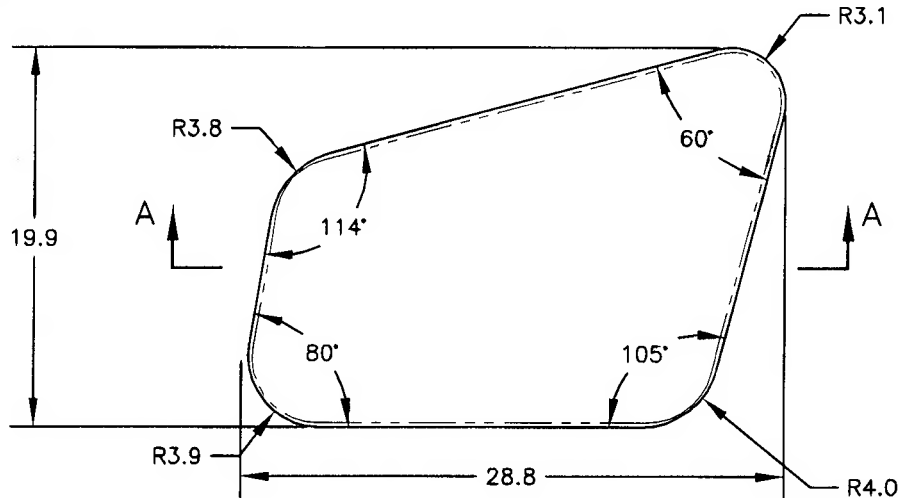
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN 9P	DRAWN BY 9P	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3624	REV. C SHEET 1 OF 1
DATE 07.06.27		TITLE BUBBLE WINDOW (A119)	SCALE 1:10
A	07.05.14	NEW ISSUE	
B	07.05.24	11.0" DEPTH WAS 12.0"	
C	07.06.27	ADD TOOL TO CONTROL BUBBLE SHAPE	

RELEASED
07.06.28. #

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WITHOUT NOTICE
WORK ORDER
NO. 33725A

D3624-2 BUBBLE WINDOW

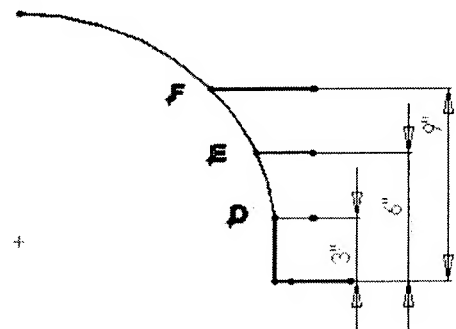
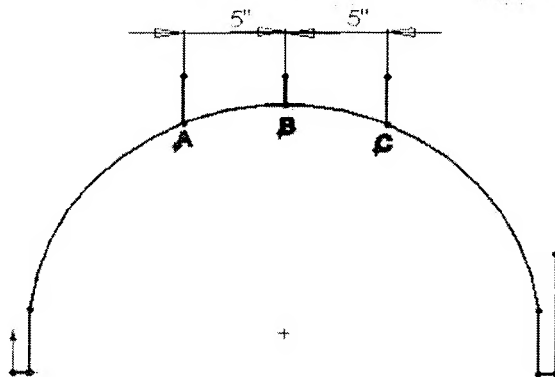
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DART

D3624-2 DIM SHEET



	(2)	TEST FLIGHT(REF)	RETURN (REF)
A	056	0.051	0.078
B	048	0.034	0.058
C	059	0.038	0.039
D	094	0.095	0.06
E	068	0.082	0.052
F	061	0.065	0.059